Abstract

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Title of diploma thesis:
Antimicrobial effect of agents predestined for prediction of contamination II.

Background: Objective of this diploma thesis is determination efficacy of antimicrobial paint designed for industrial production. Active substance of this antimicrobial paint was titanic oxide and zinc oxide respectively. Antimicrobial paints for our research were provided by Synpo a. s. Pardubice Company, we used antimicrobial paints P 41 a P 55. The second aim of this diploma thesis was the comparison of antimicrobial paints and comparison of photocatalytic activity against bacterial strains *S. aureus* and *C. albicans*.

Methods: Working with UV light pre-activated antimicrobial paints (30 minutes); working with antimicrobial paints without pre-irradiation

Main findings: Antimicrobial paint efficacy was determinated using dependence between time of irradiation antimicrobial paint (eventually contact time of suspension with activated antimicrobial paint) and number of CFU present in suspension of microorganisms

Conclusions: We confirmed hypothesis, that antimicrobial paints have higher antimicrobial efficiency against bacterial strain *S. aureus* than *C. albicans*.

Antimicrobial paints with concurrent irradiation had higher efficiency than antimicrobial paintings with pre-irradiation.

Difference between particular antimicrobial paints was clear by *S. aureus* strain. There was no significant difference observed by *C. albicans* strain.